

IN THE CLAIMS:

Please note that all claims as proposed to be amended appear in clean form below. A marked up version showing the proposed claim amendments is attached. Please amend the claims to appear as follows:

C1 2. (Three Times Amended) A peptide comprising at least part of the amino acid sequence of SEQ ID NO:9, wherein said original amino acid at position 2, threonine, is substituted with a valine, wherein said peptide is able to induce an increased binding affinity towards lymphocytes than said peptide comprising a threonine at position 2, and wherein said lymphocytes are directed against metastatic melanomas.

C2 4. (Four Times Amended) A peptide comprising the amino acid sequence of SEQ ID NO:1, wherein said peptide is able to induce an increased binding affinity towards lymphocytes than a peptide comprising the amino acid sequence of SEQ ID NO:9, and wherein said lymphocytes are directed against metastatic melanomas.

11. (Four Times Amended) A method for isolating melanoma antigen reactive tumor infiltrating lymphocytes, said method comprising the steps of:

- C3
- a. taking a sample of a melanoma from a subject;
 - b. isolating tumor infiltrating lymphocytes from said sample;
 - c. reacting said tumor infiltrating lymphocytes with a peptide comprising at least part of the amino acid sequence of SEQ ID NO:9, wherein an original amino acid at position 2 of SEQ ID NO:9 is substituted with a valine, or an original amino acid at position 8 of SEQ ID NO:9 is substituted with an alanine, and wherein said peptide is able to induce an increased binding affinity towards lymphocytes than a peptide not comprising either of said substitutions, to form an antigen-lymphocyte complex;
 - d. obtaining tumor infiltrating lymphocytes reacted with said peptide comprising at least part of the amino acid sequence of SEQ ID NO:9 from said reaction mixture of step c.; and

- C3* e. recovering lymphocytes from said antigen-lymphocyte complex thus isolating melanoma antigen reactive tumor infiltrating lymphocytes.
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14. (Previously Twice amended) A conjugate of the peptide of claim 2 and a detectable marker, wherein said detectable marker is a radionuclide.

15. (Previously Twice amended) A conjugate of the peptide of claim 4 and a detectable marker, wherein said detectable marker is a radionuclide.

19. A kit which comprises: conjugates according to claim 14 or 15.

C4 21. (Two Times Amended) A vaccine comprising the peptide of claim 4, wherein said peptide is able to induce an increased binding affinity towards lymphocytes than a peptide comprising the amino acid sequence of SEQ ID NO:9, and wherein said lymphocytes are directed against metastatic melanomas.

22. (Two Times Amended) A vaccine comprising the peptide of claim 2, wherein said peptide is able to induce an increased binding affinity towards lymphocytes than a peptide comprising the amino acid sequence of SEQ ID NO:9, and wherein said lymphocytes are directed against metastatic melanomas.

24. The vaccine of claim 21 further comprising a pharmaceutically acceptable carrier or diluent.

25. The vaccine of claim 22 further comprising a pharmaceutically acceptable carrier or diluent.